

## TECHNICAL NOTE TN-932

### TM8000 Mobile Radio Hardware Update and Firmware Requirements

20 June 2005

#### Applicability

This Technical Note applies to the TM8100 and TM8200 mobile radios.

## 1. Hardware change

#### First Release Information

From June 2005 an update to the circuit was introduced into TM8100 and TM8200 production.

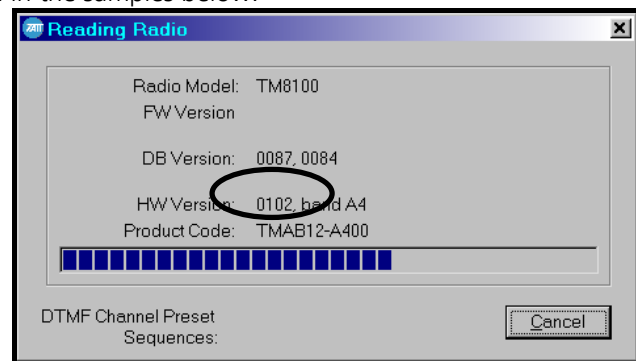
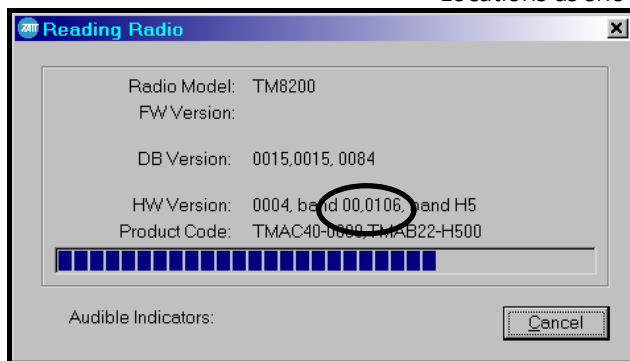
The bands being updated are UHF 25W (H5) and (H6) and are noted with the PCB IPN changing to 220-01697-10.

These changes can be noted on the bottom left of the box labels by the hardware version number(s):

H/W 0102 – TM8100

H/W 0108 – TM8200.

These hardware strings also appear in the Programming Applications. Locations as shown in the samples below.



The TMABx2-A400 (66-88 MHz), TMAB32-xxxx APCO P25 digital and all High Power TMABx4-xxxx mobile radios already have this modification implemented from first production builds.

This modification provides solutions for the following issues:

- A 'bleed' resistor has been placed between AUX\_GPI3 and ground for installations where the ignition/accessory DC input does NOT fall below 0.7V when in the 'off' position. E.g. when a separate switch is used that floats above ground in the 'off' position. This stopped the radio powering off when required.
- To achieve a stringent ETS and EIA/TIA data test at very high receive levels the RSSI will switch in the front end AGC. This hardware version has a link between a serial DAC channel and the PIN Switch.

With firmware v2.02 (or later) this DAC channel is controlled to provide a level of RF attenuation when receiving a RF level of -30dBm (or higher) and will switch out again when the receive RF level falls to -50dBm (or less).

#### AUX\_GPI1, 2 and 3 Interfacing

Please also see TN-1035 for information and suggestions on interfacing to AUX\_GPI inputs on the TM8000.

**NOTE: Firmware prior to v2.02 has no DAC control and RF attenuation will be asserted continuously with this new hardware. Do not use firmware prior to v2.02 on the new hardware.**

## 2. Serial Number

**First Production Serial Number** From radio serial number **19057652**, all UHF TM8100 and TM8200 (H5/H6) radios built have the front end AGC switched hardware. Other bands not already changed will follow as their PCB's are updated.

**Compliance Issues** None.

**CSO Instruction** **CSO's** – Please inform all logistics, sales and technical staff, and dealers of this hardware update.

## 3. Issuing Authority

**Name and Position of Issuing Officer** Graham Brenchley  
Technical Support Engineer

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